

PURCHASE SPECIFICATION FOR AN X-RAY ENCLOSURE

1.0 General Requirements:

A modular shielded X-Ray enclosure system is required that is appropriate to safely house a 130 kV X-Ray source. The system shall measure between 6 and 8 feet in depth, 7 and 9 feet in width and 7 to 8 feet in height. The system shall contain an access port suitable for an operator to gain access to the equipment. The access port shall have an interlock switch and a lockable latch. The system shall contain a safety light shall have see-through for electrical lines. The system shall be supplied with all necessary components for easy set up at the facility. Sufficient information shall be supplied for a technical assessment; drawings of the proposed system are encouraged.

2.0 Specific Requirements

2.1 X-Ray enclosure system

- Modular system containing four walls and a ceiling (the current floor provides sufficient shielding).
- The panels shall be constructed of steel and lead and shall have finished surfaces.
- The panels shall be assembled into the enclosure without the need for specialized training and shall not require the use of specialized tools, unless supplied with the system.
- The enclosure shall be free standing and require no additional support when assembled.
- The shielding shall be sufficient to contain a 130 kV microfocus X-Ray source (Kevex, 130 kV microfocus, 65 Watts @ 130 kV) end window source. The source shall always be pointed in one direction (along the width of the containment system). The source shall be directed at various specimens (metallic and polymer composite) and will be subject to scattering.
- A footprint of the containment system shall be (based on panels to not exceed 3 inches in thickness)
 - Width: 7 to 9 feet
 - Depth: 6 to 8 feet
 - Height: 7 to 8 feet

2.2 Operator Access

- An access door to the system shall allow the operator into the system for specimen installation.
- A light shall be provided within the containment system.
- A 110V outlet with a minimum of 2 plug shall be provided
- A cable feed through for the control of the X-Ray system and data acquisition shall be provided.

2.3 Safety Measures

- The door shall be supplied with an interlock switch and a lockable latch.

- An X-Ray on light shall be supplied for connection to interlock from X-Ray source.